JACG NEWSLETTER

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THE JERSEY ATARI COMPUTER GROUP

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From the Editor's Desk...

The wonder and the magic is upon us. December is laden with the zeal of youth and the glow of love. The holidays seem to materialize suddenly without warning, plunging us into a plasma of warmth. It is a magical time of year, conjuring up hidden abilities to give of ourselves as we didn't know possible. It is a time of renewal and hope, of caring and loving, a time that is delicious and must be gently relished.

We hope that you have joyous days, surrounded by those you cherish and that your coming year be filled with happiness and peace.

Frank Pazel

Frank Pazel
Editor-in-Chief, JACG Newsletter

In This Issue

MARK YOUR CALENDARS!!

JACG Meeting Schedule

January 11, 1986
February 8, 1986
March 8, 1986
April 12, 1986

THE VIEW FROM WHITE HOUSE.

The Presidents' message.
by Bill Martin

As the first order of business, I would like to thank the membership at large for the trust it has displayed in electing me President. Fear not, because my first priority is to see to it that the club prospers and continues for as long as there is an Atari user out there. I have some plans to expand and enhance both the club and its benefits, but more on that in my future columns.

We are fortunate, indeed, to have amassed a collection of officers who are loaded with enthusiasm and drive. Ideas started flowing at mini (10 minute) executive meeting that extended it to an hour. The mix of new and old should work out well because some of us newcomers may need direction from time to time. I would be remiss if I failed to mention those officers who will help to hold this whole production called the JACG, together. Editor-in- chief, Frank Pazel, a gentle bear and a major key in the organization. Frank has the heavy burden of producing the best (we think) Atari newsletter in the nation. His position allows us to reach out and touch, (did I hear a telephone ringing?), our entire membership. Vice President, Scott Brause, our electronic media specialist who has the responsibility of the JACG BBS. I'm super glad you remained an officer. We can use your creative talents and I forsee expansion of your usefulness and responsibilities. Newcomers, Secretary, Bob Mulhearn is our hardware specialist, (see Nov 85 issue) and Treasurer, Shree Vandenberg is an accounting expert, (a real one); welcome, and I'll try to make your jobs a little less tedious and allow you a little more creativity. Librarian, Don Ursem has served the club in this capacity for some years now and is one of the unsung heroes of the JACG. I want to know how he gets the time to do all of those library disks? Thanks, Don and Keep up the good work. We do appreciate it. Advertising Manager, Helene Rotondo, also a newcomer to the ranks promises to bring a breath of fresh air and new ideas to increase revenue from this under-utilized function. She's already on the job adding to our list of paid advertisers. Last but not least, Program Chairman, Jerry Frese; remember him from Atari Safari? Jerry has proven his abilities on more than one occasion and we should be seeing a lot of and from him at the future meetings. And then there's Art Leyenberger, Past President and member of the executive committee. What can be said about him that hasn't been said before? Hang in there Art. Now that the hard work is over you can slow down a bit and have some fun. At the December meeting, with the membership's approval, I'd like to honor both you and Former President Dick Kushner with Honorary Lifetime memberships in the club. What better way to say thank you! ...So what are we waiting for? Lets' "Boot Up" and get this machine into production!

Bill Martin
President, JACG

P.S. Best wishes to you and yours, from the entire staff, for a Happy Holiday and a Prosperous New Year.

HOT LINE TO THE PRESIDENT. - (201) 534-6349

GETTING DOWN TO BASICS

The Last Hurrah

by Richard Kushner - JACG

This column is folding up its tent and slipping into the night. To everything there is a season..... and winter has descented on this column. I first begain writing for the Jersey Atari Computer Group with the first issue of Volume 1. With only a few exceptions I have written one (or more) articles for each and every newsletter since that time. The "Getting Down To BASICs" column began not long after, motivated by my writing the book Basic Atari BASIC. It has recently become evident that the time had come to stop. The symptoms were all there. It became harder and harder to get motivated to sit down and write. A feeling of "I've done my share, let someone else carry the load" crept in. The fire had gone out.

I have enjoyed writing regularly for this group. I've profited from the friends I've made and the feedback I've received. I've learned a lot about computing and people from these columns and from standing up in front of you on many occassions.

This is, however, not an obituary. I will continue to write for this newsletter, but now when I feel like it rather than under the threat of a deadline. I'll enjoy that. And I will continue to do demos and toss in my two bits when approprite. I care far to much about this group to walk away cold. Sure, I use a Macintosh a lot of the time now, but I still have my original Atari... and I love it.

PDG

by Joseph S. Kennedy

Merry Christmas!! If you're like the average Christmas shopper, when you read this you'll still have most, if not all, your Christmas shopping still ahead of you. Should the lucky people on your list have Atari computers the JACG Program Library could be your one stop shopping spot for all... Better stop, this is starting to sound like a commercial.

Let's look at games first; it is Christmas coming up after all. In Volume #035 Games #012 there is a program entitled Livewire. This machine language game is patterned after the arcade game Tempest. The fast action pits you against a variety of objects attempting to travel up the 3D webs to have at you. You control you shooter around the outside of the webs with either a joystick or a paddle (I find the paddle to respond better.)and shoot with the button. The SELECT key is used to choose either the paddle or the joystick; the START key begins the game. The space bar will wipe out all objects on the web when it is depressed; but it is only usable once on each web. Several of the objects must be shot several times before they disintegrate. After each game you must again SELECT the paddle if that's what you're using (the joystick is the default setting and since this is a machine language game there is no easy way to change the default settings) and of course press START to begin the next game. Many hours can be spent playing Livewire at a price a lot less than many commercial games (and don't forget that there are several other games on the same disk).

On Volume #011 Games #008 there is a very good BASIC language game of bowling. The instructions for the game are part of the opening screen. The game allows you to throw the ball straight or hook it left or right. The computer also keeps score for you. The only drawback is that you will not know what the score is until the game is over. The computer's score sheet only shows the results of the individual frame not the cumulative total. One of our enterprising BASIC programmers could correct that for us.

Since Christmas is coming our Ataris must have a Christmas tree. Volume #039 Graphics/Sound #005 has just what it needs; a tree with blinking lights, falling snow and a "Merry Christmas" message scrolling across the bottom of the screen. And what's Christmas without Santa? On Volume #030 Music #003 Santa resides in a graphic that puts him on a roof top on Christmas Eve with the Christmas song "up on the Roof Top" playing in the background. This was developed as a demo for a Jerry White music player program but you can change the scrolling text to your own personal greeting.

For the one on your list who just got a new 800XL or 130XE how about the translator disks? Volumes #049/050 are the A and B translators that allow one to run those software titles that run on the 800 but not on the newer machines.

Have a happy holiday and keep an eye out for Halley's Comet. It should be visible to the naked eye about now.

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*            *
*      J     *
*GIVE A BIT!!*
*      C     *
*      G     *
*            *
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Outgoing JACG President Arthur Leyenberger receives the traditional Atari plaque from newsletter editor Frank Pazel as a token of the membership's thanks for jobs well done. The engraving reads "Presented To Arthur Leyenberger, Newsletter Editor, President, Columnist, In Grateful Recognition For Countless Hours, November 1985."

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THE MATHEMATICS OF MATHEMATICS (2)

Do you want to master the language of science and the apotheosis of our culture?

Do you wish to be a mathematician's mathematician?

Do you want to understand the world we live in today and will live in tomorrow?

To master any subject there is a minimum of history that one should know: how we got from there to here. In the physical sciences, there are some fundamentals that everyone is taught. They are the discovery of new models that replaced the earlier models. The Greek word for any example or model is 'paradigm' and philosopher Thomas S. Kuhn in his book on the 'Structure of Scientific Revolutions' refers to them as paradigm shifts. They include the 'revolutions' wrought by Copernicus and Darwin and Einstein where new models replaced the earlier ones and forever changed our view of the subject matter. The book earned Kuhn a membership in the National Academy of Sciences (and, if in Moscow, the honoric Academician Kuhn).

No one has yet written the 'Structure of Mathematical Revolutions' but it is needed to understand the current state of mathematics.

The development of mathematics over 3,000 years has been a series of unfoldings. From these unfoldings we can build a mathematical model of the conceptual structure of abstract mathematics today.

The historical steps are (1) logic, (2) geometry, (3) algebra, (4) analysis -- meaning the differential and integral calculus, (5) topology of point sets, and (6) category theory. Each of these steps represents, to use Kuhn's phrase, a paradigm shift or a new model from which to view the entire subject matter of mathematics.

Here is the chronology. If you wish to represent it graphically you should choose a logarithmic scale. (About 90 per cent of all the scientists who ever lived, and about three quarters of all the people who ever lived, are living today.)

500 BC	Logic
	Zeno of Elea
300 BC	Geometry
	Euclid's Elements
850 AD	Algebra
	Alkwarismi's Al Gebr
1687	Analysis
	Newton's Principia
1874	Set Theory
	Cantor's Transfinite Numbers
1945	Category Theory
	Eilenberg & Mac Lane's paper

It would be pointless to attempt to master mathematics by a study of its history -- several lifetimes would not be enough. The first words in George Temple's '100 Years of Mathematics' (Springer-Verlag, 1981) are: "Ninety per cent of all the mathematics we know has been discovered (or invented) in the last hundred years..." He covers modern mathematics in 300 pages. You can find almost all the history you will ever need in Morris Kline's monumental history of 'Mathematical Thought from Ancient to Modern Times." If you want a 50-page summary instead of 400 pages you might try 'Mathematics in Our Time' by Felix E. Browder in 'The Great Ideas Today: 1983' in the Britannica's Great Books series.

LOGIC: The beginnings of logic go back to 500 BC and the Greek philosopher Zeno of Elea and his paradox of Achilles and the tortoise. Achilles runs ten times as fast as the tortoise, but the tortoise has a 100-yard start. Achilles, Zeno argued, is always getting nearer the tortoise, but can never quite reach him. When Achilles runs 100 yards, the tortoise goes 10 yards, and so on. So where is the catch? It took many centuries before the matter was laid to rest by Cantor's theory of the infinite. Zeno's successors, such as E. L. Post and A. Church and Alan Mathison Turing, developed the foundations for today's computer science.

GEOMETRY: Euclid's 'Stoichia' or Elements remained the standard mathematics textbook for almost 2,000 years. It is a tribute to Euclid's genius that he recognized the independence of the parallel postulate; his successors who tried to establish it from Euclid's other axioms all failed. Even in recent years the French described their mathematicians as 'illustrious geometers.'

ALGEBRA: The beginnings of algebra go back to the discovery that letters could be used to represent arbitrary numbers. Today we still use the letters at the beginning of the alphabet -- A and B and C -- to represent arbitrary constants, and the letters in the middle to represent counting numbers -- J and I and N -- and those at the end for variables -- X and Y and Z.

The earliest name in algebra (whence the word algorithm) is that of Mohammed ibn Musa Alkwarismi (or Al-Khowarizmi, or Al Khwarismi) who in the year 850 wrote the first mathematical book written in Arabic, Al Gebr W'al Muquabala. Its content was essentially a variety of methods for solving algebraic equations. 'Al gebr' refers to the transposition of negative terms on one side of the equation to the other side and changing their signs. 'Al muquabala' means the simplification of the equation by gathering similar terms. The name of his book survives in our word algebra.

Algebra developed at the hands of Viete and Cardano and Fermat. Finally, in 1637, geometry and algebra were united by Rene Descartes in the one appendix which outshone the book: the appendix on Geometry to his book Discours de la Methode which established him as the founder of so-called 'analytic geometry.' Geometry problems could now be solved as algebra problems. The general equation of the third degree -- $Ax^3 + By^3 + Cz^3 + Dx^2y$, etc. -- could now be used to represents all the conic shapes and their sections.

ANALYSIS: The next paradigm shift occurred with the publication in 1687 of Newton's Principia and the simultaneous invention of the calculus by Baron Gottfried Wilhelm von Leibniz. He helped establish the Berlin Academy; we have executed his conceptions of symbolic logic and computers, and still use his calculus notation today.

The intersection of ANALYSIS and GEOMETRY was filled in by Karl Friedrich Gauss with his 1827 book on differential geometry

entitled 'Disquisitiones generales circa superficies curvas.' Then the Bernoullis (there were nine of them) helped fill in the intersection of ANALYSIS and ALGEBRA with their work on infinite series and differential equations.

The intersection of GEOMETRY and ALGEBRA and ANALYSIS was then filled in by the work of Cauchy and Riemann and Weierstrass on complex numbers.

TOPOLOGY: The earliest theorem in topology was known to Descartes and proven by Euler: in a convex polyhedron the number of vertices and faces are equal to the edges plus 2. A cube has 8 vertices and 6 faces which equals 12 edges plus 2.

However, George Cantor with his 1874 book 'Beitrage zur Begrundung der transfiniten Mengenlehre' or Contributions to the Founding of the Theory of Transfinite Numbers laid the foundations for set theory, and another paradigm shift. He was a pioneer in dimension theory, which itself was the origin of the so-called point set theory, which led to the development of general topology.

Cantor showed that there were countable infinities (the whole numbers, the squares of the whole numbers, the rational numbers) that can be counted because they can be matched up one-for-one to the whole numbers. He also showed that there were uncountable infinities (such as the real numbers, which cannot be counted). He died in the insane asylum at Halle, Germany, in 1918. (Unanswered question: Would we have had set theory without Cantor?)

CATEGORY THEORY: The next paradigm shift occurred in 1945 with the publication by Samuel Eilenberg and Saunders Mac Lane of their paper on the General Theory of Natural Equivalences in the Transactions of the American Mathematical Society. The authors helped create, not merely a new abstract algebra but, as George Temple puts it, "what can be taken to be the most abstract and fundamental formulation of mathematics."

Instead of looking at the objects of mathematics, they looked at the transformation of the objects -- much as a programmer today will either take his data, or the transformation of his data, as his primary concern.

As Eilenberg and Mac Lane put it: "In a metamathematical sense our theory provides general concepts applicable to all branches of abstract mathematics, and so contributes to the current trend toward uniform treatment of different mathematical disciplines. In particular, it provides opportunities for comparisons of constructions and the isomorphisms occurring in different branches of mathematics."

Now that we are aware of the paradigm shifts in mathematics, and how each new shift creates a complete new unfolding of the mathematical universe, we can set about creating a model of mathematics that will:
(1) preserve a unified viewpoint, and
(2) prevent us from getting lost in the detail.

What is mathematics? How does it fit into our model? Stay tuned!

JACG Survey

The Fate of the Machines and Men

by Jerry Frese - JACG

The fate of the 8 bit computers is at a cross roads. Are the Atari 8 bit machines going to have the same fate as the Atari 2600 VCS and PACMAN? Are the 8 bit machines being used today? If so, what for?

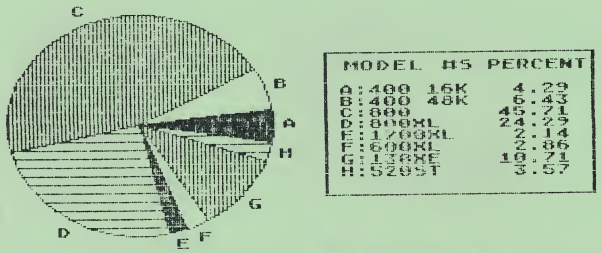
Is there a market for 8 bit computer software? How about the new Atari 16 bit machines? How many users are there of the 520ST and is this number going to grow? What is the fate of the Jersey Atari Computer Group (JACG) if it is based on the Atari machines?

To help the new officers of the JACG answer these questions and plan for the future, I took a survey of attendees at the Nov. meeting. The survey was made up of 21 multiple choice questions. 103 surveys were returned.

The results show that use of the Atari machines is high. Three quarters of the respondents said their machines are used more than once a week. Word processing, not games, is the software most often used. Game software just beat out telecommunications as the second most used. Database management and spreadsheet software round out the list of the most popular software.

In the last six months, the JACG members collectively have spent between $7,000 and $12,000 on software. The figures indicate that one fifth of the members buy a game a month. According to the responses given by the members themselves, 20% plan to increase their spending on software within the next six months.

Investment in hardware is equally impressive. The typical system configuration is the original 800 computer with 2 disk drives, a color monitor, a printer and a modem. 99% of the configurations have at least one disk drive. Some households have more than five disk drives. Every model of Atari computer was represented in the survey; the 400, 800, 800XL, 1200XL, 130XE, 520ST and even the 600XL. Almost half of the members said they have more than two machines, some have as many as 6. Only five 520ST owners responded. This is only a temporary condition though because half of the respondents said they were thinking about buying a 520ST.



MODEL	AS PERCENT
A:400 16K	4.29
B:400 48K	6.43
C:800	45.71
D:800XL	24.29
E:1200XL	2.14
F:600XL	2.86
G:130XE	10.71
H:520ST	3.57

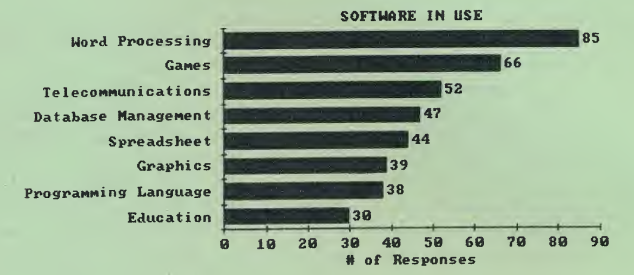
COMPUTERS IN SURVEY

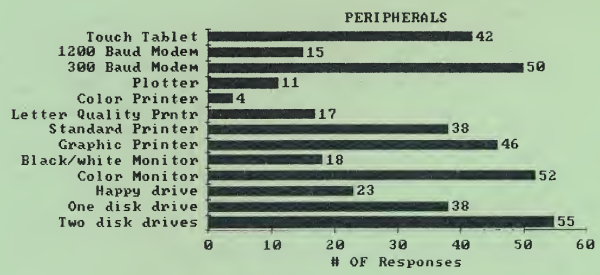
In almost every reply, the person attending the meeting is the primary user. The numbers for other users are low.

20% for high school/college students
15% for elementary students
8% for spouses
4% for pre-schoolers

Only 2% of the respondents said they had not used their machines at all during the last six months.

A surprising statistic is the high number of modems in use, 67%. I think this is the trend for home computers in the future. Atari 8 bit machines are not going to replace the 16 bit MSDOS machines. As Donald Forbes lamented in his article last month entitled, "To buy or not to buy"; which machine do you buy?





Let's take a look at the person who has an IBM PC at the office and wants to a computer to use at home. For less than $200 you can purchase an 8 bit Atari computer, a modem and one of the remote access programs that run under MSDOS. Then you have the best of both worlds. The business software available in the MSDOS world via a dial-up connection, and all the games and graphic wonders of Atari. This and electronic mail may be the role for the 8 bit Atari computers in the future. 2% of our membership is already using telecommunications.

So the 8 bit Atari machines need not go the way of the 2600 VCS. The Atari computers are more versatile than their predecessors. The 8 bit machines can be the home users portal to the world of MSDOS or any other operating system that you like. But what about the Jersey Atari Computer Group?

Most (92%) of those attending the Nov. meeting were members of the JACG. 85% of those responding had attended 5-6 meetings in the last six months. This is remarkable

since this period included the three summer months. This interest in the JACG is not a new trend. 40% of the respondents reported that they have been members for more than 2 years.

With use of the Atari computers so high and interest in the meetings so strong, the fate of both the 8 bit machines and the JACG looks good.

JACG Membership

The Jersey Atari Computer Group (JACG) invites you to become a member. Dues are $20.00 per year and entitle the member to: 1) Receive the monthly newsletter; 2) Purchase programs from the group's extensive tape and disk libraries at special rates; 3) Join special interest groups or form new ones; 4) Benefit from the expertise and experience of other Atari computer users; 5) Participate in group purchases of software at substantially reduced prices; 6) Receive a membership card that entites the member todiscounts at local computer stores; 7) Attend monthly meetings to learn about the latest hardware and software, rumors, and techniques for getting the most out of your Atari computer; 8) Submit articles and programs to the newsletter and give demos and presentations at the monthly meetings; 9) Participate in sale/swap activities with other members; 10) Access the JACG nationally famous Bulletin Board; and 11) Have a lot of fun.

If all of this sounds good to you send a check or money order, payable to JACG, to:

Shree Vandenberg, Treasurer
826 2nd Place
Plainfield, NJ 07060

Remember, receiving the JACG Newsletter is just one of the many benefits of being a member of JACG.

Membership Renewal

Take a moment and look at your mailing label on a recent issue of the JACG newsletter. Check the bottom right hand corner following "Last Issue:". This is the month/year when your membership expires. Try to renew at least one month early. This helps us keep our book keeping in order and avoids your missing any issues of the newsletter.

There are two easy ways to renew:

1. Fill out a membership renewal form in the front lobby before our monthly meeting and present it with $20 (in cash or check) to the Treasurer.

2. Copy the information on your mailing label and send, with $20, to:

Shree Vandenberg
Treasurer, JACG
826 2nd Place
Plainfield, NJ 07060

>>>CHECK YOUR LABEL<<<
>>>TODAY!<<<

HALLEY PATROL
ANTIC CATALOG

Reviewed by
Joseph S. Kennedy

Mark Twain never saw Halley's Comet. The year he was born it flew by earth and 76 years later in 1910 when he died it came again. Most people only get one chance to see the comet so let's use our Ataris to help us make sure we don't miss it. One program that will help you find Halley's Comet is Halley's Patrol from the ANTIC catalog. This program is described as an interactive graphic almanac of the seven months that the comet will be visible to the average viewer. Its screen consists of two parts. The upper two-thirds of the screen is a graphic display of the comet's location in the sky. The lower third gives a variety of information on the comet such as the date of the display, the comet's Right Angle and Declination, distance from and speed in relation to the earth and the sun, as well as the comet's position in relation to the earth, sun and moon.

The graphic display in the upper part of the screen shows a portion of the sky around the comet that is about equal to the field of view in a 35mm camera with a normal (50mm) lens. While this is good in planning photographs of the comet, one will find a good star chart will help in locating the comet. The star chart will help in the general location of the area the comet is in while the Halley Patrol graphic will give the precise location. This combination is very effective as it enabled me to locate the comet with binoculars. (As a side note, the graphic star display is the same as that in Space Base by the same author and available from ANTIC. Space Base provides detailed information on all items shown on the screen.) The main problem I find with this program is the time necessary to set-up my computer and television in the backyard when I want to search for the comet. The inclusion of a screen dump would have been a nice touch for this program that would see most of its use in the outdoors.

Along with Halley Patrol you also get the Halley Watch disk which is a computer slide show on the comet. The program gives a quick look at the comet - its make up and its tracking in the night sky. This impressive program was prepared with ANTIC's Fader program for graphic slide show type displays.

Halley Patrol along with Halley Watch is a good buy for someone who wishes to follow the progress of Halley's Comet with the help of their computer. The program is available from ANTIC for $17.95.

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*   J    *
*GIVE A BIT!*
*   C    *
*   G    *
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Reinventing the Telephone

by W. Schneider - JACG

For over 100 years the Bell System designed its subscriber network for one purpose; to transmit conversations between two locations. The human voice is analog and the system was designed accordingly. Analog (audio) transmission has inherent limitations. It can be distorted, is subject to volume loss at a distance and can be affected by other electrical devices. New demands are being placed on this system by the increasing number of information channels with bandwidths much broader than voiceband and the growing customer sophistication.

Modems are devices that act as automatic translators between the digital computer and the analog telephone system. A modem converts (MODulates) digital signals from a computer into audible analog tones suitable for transmitting over a telephone line. It also converts back (DEModulates) the transmitted signal into digital signals. The binary data transmitted is nothing more than a series of electrical impulses sent between two computers. A standard called RS-232C established by the Electrical Industry Association was created to insure the compatibility of signals between modems. It defines the voltage and resistance of the transmitted electrical impulses.

Most analog systems require the use of 4000 hertz (cycles per second) of bandwidth for each voice channel. A modem also requires two sets of frequencies; one set for transmitting and another for receiving. This means that a telephone line must carry two different signals (channels) simultaneously, one in each direction (full-duplex). When both computers are in full duplex mode the characters are echoed back to the sender and printed on the senders screen. If only one signal is used (half-duplex) the result is like CB-radio, which can send and receive signals but not simultaneously.

The carrier pulse of a 300-b.p.s. modem is transmitted by using tones of a specific pitch to represent a binary 0 and another to represent a binary 1. One group of tones is sent by the modem originating the call. An audio tone of 1070 hertz is used to represent a logic 0 and 1270 hertz to represent a logic 1. The modem at the other end sends back data using 2025 hertz for logic 0 and 2225 hertz for logic 1. This creates two fairly wide bandwidths (200 hertz each) which are separated by a guard band of no signal (755 hertz wide) to make it easy for the modem to differentiate between the two channels.

The number of bits, the digital zeros and ones, transmitted per second is defined as the baud rate. Although 300-b.p.s. modems transmit at 300 baud, the 1200-b.p.s. and 2400-b.p.s. modems transmit at a technically defined 600 baud. This apparent discrepancy in rate value is due to the local analog telephone system which can not handle a baud rate higher than 600 for duplex communication. The amount of data sent at one time makes up the difference. By dividing a second of time into 600 parts, called signal modulation, the 1200-b.p.s. modem packs 2 bits into each part (baud) and thusly transmits 1200 bits per second. Using a technique called four-level phase shift keying, each baud can represent a string of two bits. There are designated frequencies for each of the four digit patterns; 00, 11, 01 and 10. The 2400-b.p.s. modems pack 4 bits into each baud. They use a method that yields 16-level phase shift keying, so each baud can represent a string of four bits.

Just as there is a convention regulating the nature of the electrical impulses sent between computers there are standards called protocols governing the format of data exchange. Communication is impossible if all the devices are not following the same set of rules (protocols). There are various layers of protocol in data communication. The first layer is at the physical (modem) level. This is the method by which the signals carrying the data elements are sent. They must use the same tones and modulation scheme. Bell modem protocols are the industry standard for 300-b.p.s. (Bell 103) and 1200-b.p.s. (Bell 212A) modems. The newer 2400-b.p.s. modems are generally tied to the United Nations International Telephones Committees V.22bis standard.

The next protocol layer is the datalink layer. This layer defines the method by which data elements (characters, messages) are sent and received. Another is network protocol. This refers to the presentation-level protocol of the accessed system.

On March 4, 1985 the FCC authorized New Jersey Bell to provide protocol conversion within the local exchange network. Protocal conversion, an electronic process that permits computers using different data formats to communicate with each other, is one of two technological innovations neccessary for economic Local Area Data Transport (LADT). The second is packet switching, a technique that takes advantage of the gaps between bursts (packages of data) and interleaves many separate data transactions over a single telephone circuit. Packet switches are specialized computers with packet switching and protocol handling software operation within them.

N.J. Bell's small business and residential customers will be able to subscribe to LADT services in the first half of 1986. The planned in-home applications will include videotext and alarm monitoring. Possible applications include interactive communications with an information provider's database (such as the Directory Assistance computer), electronic mail, remote shopping, remote banking, office work at home and recreational uses.

LADT is a method by which customers will send and receive digital data over their existing telephone line. Dial-up LADT will enable customers with a home computer without a modem to access certain data

services and not tie up their telephone for normal usage. This service uses a data voice multiplexer (DVM) which squeezes more out of the transmission medium. A multiplexer converts multiple channels into a composite signal for transmission purposes.

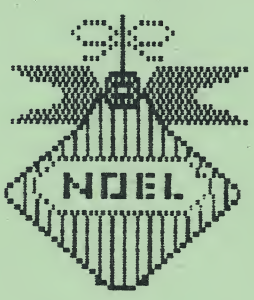
Depending on which data services are eventually available, customers with occasional requirements for data transport may find dial-up LADT attractive. Subscribing to this service requires the purchase of a VDM, which costs about $200, and the rental of telephone equipment, anticipated as $5 to $7 per month, plus a small charge per packet. This refers to the number of data packets transmitted and not the connect time, which includes typing and "think time". These prices are slightly less than the purchase of a high-speed modem and the addition of a second telephone line.

No dialing is required to access this system which can transmit up to 9600-b.p.s. Although 1200-b.p.s. is adequate for text display, the demand for better quality graphics will require this high-speed transmission rate. The DVM is wired to the subscriber's protector block and their telephones are wired to it. This device contains an RS232-C connector for cable connection to the computer. The RS232-C standard of 19200 b.p.s. limits the length of this cable to fifty feet. An interface device like the Atari 850 is required for these connections.

There are currently over 500 information service vendors in the U.S. It is expected that the cost savings achieved with LADT will be passed on to their subscribers through lower connect rates, partially offsetting the additional charges above. The ability of packet switching, through the use of X.25 protocol, to support multiple calls over a single access line reduces the number of lines and associated equipment host computers need. In 1984 a major U.S. bank had 40 different networks using more than 20 different communication protocols. In most buffered systems more than 90% of line time is not used for transmission purposes. With LADT this system can be consolidated and more cost effective.

These ISDN-type services are examples of the changes within the telephone industry. The Intergrated Services Digital Network (ISDN) is a planned hierarcy of digital switching and transmission systems. Synchronized so that all digital elements speak the same "language" at the same speed, the ISDN will provide voice, data and video in a unified manner. ISDN represents the next generation where there are no electronic distinctions between voice, data, video or facsimile. It will allow information to enter and exit all transmission facilities in a completely digital fashion.

Computer communications is rapidly becoming one of the most significant uses of computer technology. The gradual evolution to a totally digital telephone network will improve all aspects of telecommunications.



EASTER EGG

Hitchhiking To Dallas

In Hitchhiker to get the babel fish: Take off the gown, tie its sleeves, and hang it on the hook. Then lay the towel over the drainhole in the floor, and put Ford's satchel in the front of the robot panel. Lastly, throw something into the air.

In Dallas Quest to get past the giant rat in order to get the shovel in the barn: put the sunglasses on the owl and have him attack the rat.

PEEKS AND POKES

by Kenneth J. Pietrucha - JACG

Last month's column showed you how to poke the sound registers instead of using the SO. or sound command. If you missed this column, go back and read it. It's short and will be worth your time.

If you have any musical ability, you will soon realize that some of the notes or tones generated by the ATARI are slightly off pitch. What I want to show you this month is how to combine two of the voices to generate a single precision note.

The demonstration program is divided into two parts. The first part does the simple mathematical calculations that are poked in part two and generate the actual sound.

First, the desired precision tone frequency, in cycles, is entered as F. The program then performs an intermediate calculation for (AUDF), the control rate. The variable, AUDF, is then used to calculate the course and fine frequency that will be poked to give us our precision tone.

The pitch is a calculation of the tone that will result when FINE and COURSE are combined. Pitch is not needed for the system to operate and may be deleted.

After the calculations are made, the sound registers of voice 0 and 1 are set to off. Location 53768 is poked with 80 to turn the clock on and combine voice 0 and 1.

The frequency of FINE is poked in 53760 or Voice 0, while COURSE is poked in 53762 or Voice 1. The precision tone is heard for a few seconds, then the sound is turned off.

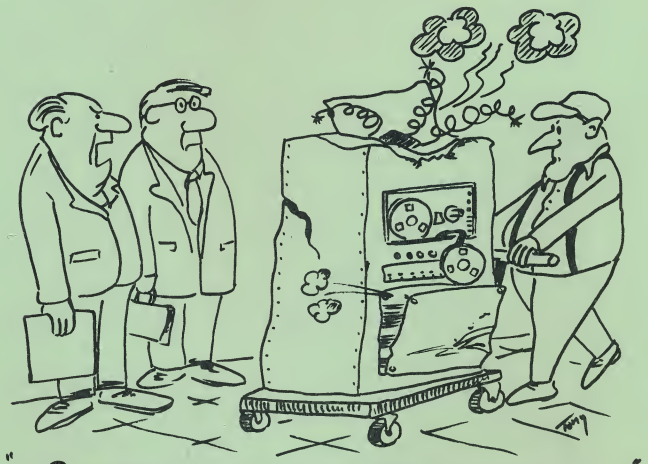
The program will generate sounds up to approximately 64 KHZ in frequency. This is far above your range of hearing and may not be too popular with your dog.

The same technique can be used to calculate another precision tone using the remaining two voices. Once you have two precision tones, you can use them to generate the tones to dial your phone. I have written programs to dial my phone by holding the mouth piece near the monitor speaker. It may not be practical, but it did prove that the accuracy of the tones was present. The North American standard is ± 1.5% for the digit generators.

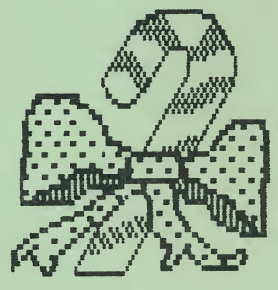
```
  1 REM PRECISION SOUND
  2 REM BY KENNETH J. PIETRUCHA
  3 REM J.A.C.G. 11/6/85
  5 GRAPHICS 0
  7 COARSE=0:FINE=0
 10 ? "THIS PROGRAM CALCULATES THE TWO"
 15 ? "FREQS NEEDED FOR PRECISION"
 20 ? "SOUND CLOCKED AT 1.789790 MHZ."
 22 ?
 23 ?
 25 ? "ENTER THE FREQUENCY DESIRED"
 30 INPUT F:AUDF=(1789790/(F*2))-7
 40 COARSE=INT(AUDF/256)
 50 FINE=INT((AUDF)-(256*COARSE)+0.5)
 60 ? CHR$(125)
 70 ? "THE DESIRED FREQ IS ";F
 72 ?
 75 ? "THE TWO INTERMEDIATE FREQS ARE:"
 80 ? "       COARSE= ";COARSE
 85 ? "         FINE= ";FINE
 87 ?
 88 ?
 90 PITCH=1789790/(2*(256*COARSE+FINE+7))
100 ? "THESE TWO FREQS RESULT IN A"
105 ? "PRECISION FREQ OF ";PITCH
110 ?
115 ?
130 ? "PRESS START TO PERFORM ANOTHER "
132 ?"CALCULATION"
133 ?
134 ?
140 ? "PRESS OPTION TO HEAR THE TONE"
142 ? "GENERATED BY THE LAST CALCULATIONS"
145 X=PEEK(53279)
147 IF X=7 THEN 145
148 IF X=6 THEN GOTO 5
149 IF X=3 THEN GOTO 200
200 ? CHR$(125)
210 POKE 53761:REM SET VOICE 0 OFF
211 POKE 53763:REM SET VOICE 1 OFF
220 POKE 53768,80:REM SELECT THE CLOCK FREQ,
AND JOIN VOICE 0 AND 1
230 POKE  53761,160:POKE  53763,168:REM  SET
DIST. AND VOL.:REM TURN UP VOL.
235 POKE 752,1:REM TURN OFF CURSOR
240 POSITION 4,8
241 ? "FREQUENCY HEARD IS "; PITCH
260 POKE 53760,FINE:REM POKE VOICE 0
270 POKE 53762,COARSE:REM POKE VOICE 1
280 FOR X=1 TO 500:NEXT X:REM PLAY TONE  FOR
A TIME
290 POKE 53761,160:REM TURN OFF VOICE 0
291 POKE 53763,160:REM TURN OFF VOICE 1
295 GOTO 5:REM START OVER
```

The locations to poke for the other two voices can be found in "Mapping the Atari". This is pretty heavy stuff, so go slowly.

See you next month.



"WE PROGRAMMED IT TO HANDLE N.J. CAR REGISTRATIONS!"



NOVEMBER MEETING HIGHLIGHTS

Reported by
Joseph S. Kennedy

At 9:45 on Saturday morning November 9, the audience warm-up for the JACG 135 Minutes Show began. Actually this was just the beginning of the new format for our meetings as set-up by Jerry Frese our new Program Chairman. Meetings will consist of the Q&A period from 9:45 to 10:00; from 10:00 to 11:00 the normal features of the meeting (i.e. club business, game demos, demos of the club library programs, etc.); from 11:00 to 11:45 will be the theme of the meeting followed by the ST portion of the meeting.

True to the script Jerry opened the meeting on time at 10:00. Art told us that the ST library is a reality. A quick check showed 9 or 10 ST owners in the auditorium. Both Creative Computing and Popular Computing are going by the wayside. December should be the last issue for both. And in the "for what its worth" department Happy 7.0 is to be out by Christmas. (Yes - 1985.)

Elections were held giving us the following new officers:

President - Bill Martin
Vice President - Scott Brause
Treasurer - Shree Vandenberg
Secretary - Bob Mulhearn

Congratulations to all the above. Let's all get behind them with all the support they need.

Frank Pazel presented Art a handmade mahogany plaque (which Frank made himself - its seems the newsletter doesn't keep him busy enough) for his service to the JACG. Frank also gave Art a collection of Tony Pellechio's cartoons which featured Art.

Frank introduced Richard Block, the president of the Rockland [county NY] Atari Computer Group. The Robotics SIG meets at Bell Labs After the monthly meeting; for more information contact Bill Brandt. Frank has Print Shop graph paper he made for anyone who wants it. Tom Pazel has written a utility program for Print Shop which will print out sorted graphics 20 to a page and allows you to rename or display the graphics. This will be available in the Disk Library.

Jerry Frese explained the new format for the meetings likening it to a TV magazine such as 20/20. (Should we call it 6502/6502?) He announced that the themes for the next several months would be as follows:

Dec - Gift ideas
Jan - Telecommunications
Feb - Printers
Mar - Financial

If you can offfer any help on any of these themes or have any suggestions for Jerry contact him
at 201-895-3736.

Nick Scalero announced that the printers described at the last meeting have been delivered. If anyone who didn't sign up would like one contact Nick at 577-0388

Kirsten Frese demoed Jenny of the Prairie, a graphic adventure that introduces adventuring software to girls. As she usually does, Kirsten did a good job after she banished her father from the stage.

Scott Brause announced that the BBS is back in operation but without the hard disk which is still being repaired. Therefore, there are no downloads available until it is fixed.

Joe Kennedy demoed a couple of programs that help to locate Halley's Comet in the sky. The first was Halley Patrol from the ANTIC Catalog. This program uses the Space Base program from ANTIC to place the comet in the sky. The second program was Skyscape from the November issue of Compute. This program will show you where the comet is located in the sky for the time and location you select. It will also place the Moon and planets in your sky. He also showed the Halley Watch slide presentation prepared by ANTIC and included with the Halley Patrol program.

Our featured speaker for today was to be Ron Luks of Compuserve. Unfortunely, Ron did not show up for the meeting. Larry Gentieu and sons used the extra time thus available to present the Sound Mouse that they have devloped. The Sound Mouse is a microphone that picks-up sounds and feeds the input through the joystick port. With the accompanying software you can make your Atari into a color organ. (Remember those? They flash colors in time with the music.) You can also use the Sound Mouse to play games that were developed by the Gentieu's for the Sound Mouse.

Mary Russomano also helped by demoing several Disk Library programs including a digital clock that uses Roman numerals, a home financial program and the Scriptor word processing program.

In the ST portion of the meeting Art demoed a Unix shell for the ST by Beckenmeyer Software at $49.95. He also demoed a public domain calculator for the ST.

****
GIVE A BIT!!
****

Byte-sized Programming

by Tom Pazel - JACG

Way back in April, this column showed how to save a GRAPHICS 7+ or 8+16 screen to disk as a file. Since the running of that column, I have had no one ask me how to do it. That's good. I suppose that means either 1) everybody understood it or 2) nobody read it. I don't think the latter is the case because, at the end of the column, I left as an exercise the writing of the code that would take the file just created and load it back into memory and restore it to the screen. I have been asked by numerous people (one, actually) to give the "answer", so here goes.

In order to restore a "screen file" to the screen, you just put it back where you found it. Sounds simple enough, right? The code to restore the screen is very close to the code to save it to disk:

```
 10 GRAPHICS 8+16
 20 REM Find screen RAM
 30 SCRN=PEEK(88)+256*PEEK(89)
 40 REM OPEN file for input
 50 OPEN #1,4,0,"D:MYPIC"
 60 REM Bring those bytes back
 70 FOR I=SCRN TO SCRN+7679
 80 GET #1,BYTE:POKE I,BYTE
 90 NEXT I
100 CLOSE #1
110 REM There's your screen!
```

Just like when you created the file, you issue a GRAPHICS command to set up a display list and an area of RAM for screen data (line 10). As line 20 suggests, line 30 finds the address of screen memory. Line 50 OPENs the file for input processing. Lines 70-90 perform the function of GETting one byte from the file and putting it into screen RAM (where it came from in the first place) 7680 times. Line 100 merely says "I'm done with the file".

That's all there is to it. This program is entirely in BASIC (as was the save screen program) so it is painfully slow for most applications. Using CIO for the input portion of the routine would allow for top-speed data transfer. Next month, I'll show how to accomplish this from BASIC using only a few bytes of machine language.

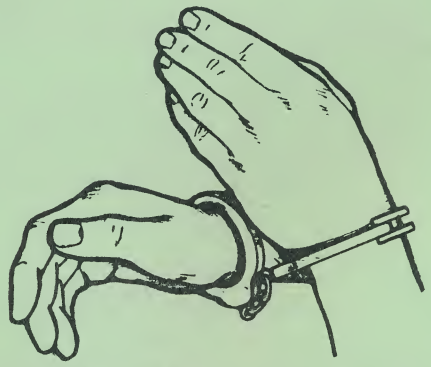
In the meantime, remember: Real programmers don't document; if it was hard to write, it should be hard to understand.

The Adventures of Captain XE-RAMDISK And The MPP 1000E

Don't ask me how I come up with these crazy ideas, but being a tightwad sometimes helps to motivate me. I was looking for a way to cut down on Compuserve access time when down-loading (henceforth known as "DL") multiple files with my MPP modem. Now everybody knows that the only way to DL is to use the buffer storage procedure and then dump to the disk after you disconnect, but what happens when you want to DL multiple files that are greater than your buffer? Up to now, the only way was to copy from buffer to disk while ONLINE and then to delete the buffer and start all over again, a time (and money) consuming process. Well Rinkey Dinks (?), a new way has been invented by yours truly to circumvent the establishment for you lucky 130 XE owners. Here goes!

First, create a new disk with DOS 2.5, RAMDISK and SETUP. Next, copy the MPPE file from your MYDOS naming the file, "MPPE". Yes, they are compatible and be sure to copy the data (MPP1.DAT) plus any other data files that hold the autodial phone numbers. Last, copy your AUTORUN.SYS (if you have one).

When you boot up, the RAMDISK will load, followed by the AUTORUN.SYS leaving you with DOS intact. All you have to do now is binary load ("L" command) the MPPE file and you're on your way. When your buffer fills up use the (MPPE) "C" option and "D8:filename.extn" as the destination. It took about 10 seconds for a 150 sector file transfer. Go back, clear and reset your buffer and you are now ready to DL. After you've disconnected from your modem, use the (MPP) "L" command to re-load your buffer from D:8. It's instantaneous and you can now dump to the regular disk drive as normal. Be sure to clear the buffer after each DL or you'll be stacking one program on top of the other. One more warning; be sure to jot down the file names used when saving to the ramdisk because the directory search does not extend to D8: and any data you have there is destroyed once you power down. It works!



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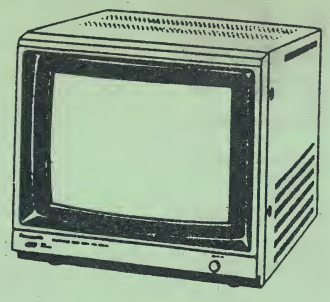

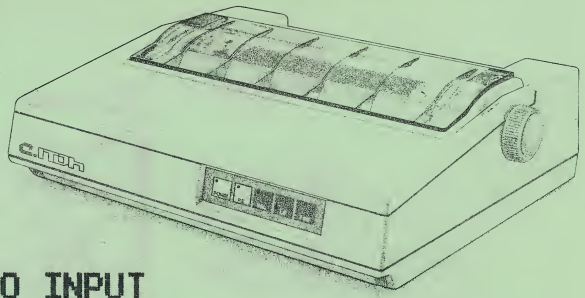

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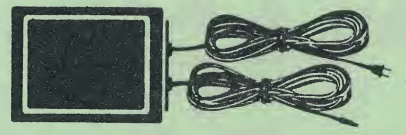

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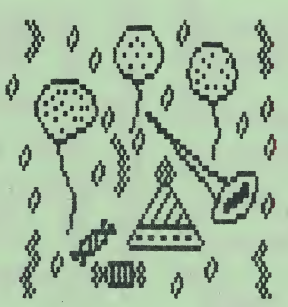
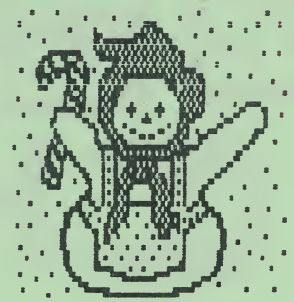


AND A H-A-P-P-Y NEW YEAR


MATT CAROLINE GEMINI 2

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Now Available In The JACG Disk Library

KUSHNER DEMOS FORTH
PART TWO OF THREE

By Donald Forbes - JACG

Now that we can roll a die, how about displaying it in color? Your Atari computer can produce dazzling graphics in many shapes and forms. We can use graphics mode 3, and our ability to draw on the screen, to write a program to display all the available colors.

```
: J R> R> R> R R# !
  >R >R >R R# @ ;
: DELAY 0 DO LOOP ;
: GRAPHICS-3-COLOR-BARS
  3 GR. 0 0 0 SETCOLOR 1 COLOR
  19 2 DO
  2 I PLOT 36 I DRAWTO 2 +LOOP
  16 0 DO \ luminosity
  15 0 DO \ color
  0 J I SETCOLOR
  ." Setcolor 0," J . ." ," I .
  15000 DELAY CR CR CR CR
  2 +LOOP LOOP ;
```

With this information we can draw the "1" face of a die as follows:

```
: THE-"1"-FACE-OF-A-DIE
  3 GR. 1 COLOR
  8 1 DO 1 I PLOT 7 I DRAWTO
  LOOP 2 COLOR 4 4 PLOT ;
```

We can also display the same die in two different colors after a delay, with this code.

```
: DISPLAY-A-1-DIE
  8 1 DO 1 I PLOT 7 I DRAWTO
  LOOP 2 COLOR 4 4 PLOT ;
: DELAY 0 DO LOOP ;
: CONTROL-DIE-DISPLAY
  3 GR. 1 COLOR
  DISPLAY-A-1-DIE
  15000 DELAY 3 COLOR
  DISPLAY-A-1-DIE ;
```

For the other faces, we must plot different points. The five face, for example, requires plots at 2 and 2, 6 and 2, 4 and 4, 2 and 6, and 6 and 6. We can also display the die at different places on the screen by converting the plot coordinates into variables.

```
0 VARIABLE XX 0 VARIABLE YY
: DISPLAY-A-"1"-DIE ( n1 n2 - )
  XX ! YY !
  3 GR. 8 1 DO
  XX @ 1 + YY @ I + PLOT
  XX @ 7 + YY @ I + DRAWTO
  LOOP 1 COLOR
  XX @ 4 + YY @ 4 + PLOT ;
```

In FORTH, the CASE statement replaces the ON...GOSUB statement in BASIC. This means that you can execute a program like the following:

```
: ZERO ." zero " ;
: ONE  ." one  " ;
: TWO  ." two  " ;
: MYNUMBER
    CASE
  0 OF ZERO ENDOF
  1 OF ONE  ENDOF
  2 OF TWO  ENDOF
    ENDCASE ;
```

so that you can now enter

```
2 MYNUMBER ." two  " ok
1 MYNUMBER ." one  " ok
0 MYNUMBER ." zero " ok
```

The coding to implement this version of the CASE statement was developed by Dr. Charles E. Eaker of the department of philosophy of the State University of New York in Oswego NY and published in the Sept 1980 issue of Forth Dimensions. You will want to file it away for reference. The CASE statement replaces a multitude of nested IF statements.

```
: CASE ?COMP CSP @ !CSP 4 ;
  IMMEDIATE
: OF 4 ?PAIRS COMPILE OVER
  COMPILE = COMPILE OBRANCH
  HERE 0 , COMPILE DROP 5 ;
  IMMEDIATE
: ENDOF 5 ?PAIRS COMPILE BRANCH
  HERE 0 , SWAP 2 [COMPILE]
  ENDIF 4 ; IMMEDIATE
: ENDCASE 4 ?PAIRS COMPILE DROP
  BEGIN SP@ CSP @ = 0= WHILE 2
  [COMPILE] ENDIF REPEAT
  CSP ! ; IMMEDIATE
```

The CASE statement can be handy at times. Here is a program that checks on the joystick position and tells us in which direction it leans. The memory locations of the four joysticks are 632 to 635.

```
: FIVE      ." Southeast " ;
: SIX       ." Northeast " ;
: SEVEN     ." East      " ;
: NINE      ." Southwest " ;
: TEN       ." Northwest " ;
: ELEVEN    ." West      " ;
: THIRTEEN  ." South     " ;
: FOURTEEN  ." North     " ;
: FIFTEEN   ." Upright   " ;
0 VARIABLE STICK
: MYNUMBER CASE
       5 OF FIVE      ENDOF
       6 OF SIX       ENDOF
       7 OF SEVEN     ENDOF
       9 OF NINE      ENDOF
      10 OF TEN       ENDOF
      11 OF ELEVEN    ENDOF
      13 OF THIRTEEN  ENDOF
      14 OF FOURTEEN  ENDOF
      15 OF FIFTEEN   ENDOF
           ENDCASE ;
: JOYSTICK 500 0 DO 632 C@
  STICK ! STICK @ MYNUMBER 500 0
  DO LOOP LOOP ;
```

If you ever wondered why the joystick positions use these code numbers, just translate them into their four-bit binary equivalents. The first zero (in the leftmost position) means right, the next is left, the next down and the rightmost up. For example, North corresponds to

```
BINARY 14 . DECIMAL 1110 ok
```

If you wish to compare the CASE statement with nested IF statements, here are two programs which use the joystick to draw on the screen. The first one is adapted from Ekkehard Floegel's groundbreaking book 'FORTH on the Atari.' It will fail if you cross the screen borders.

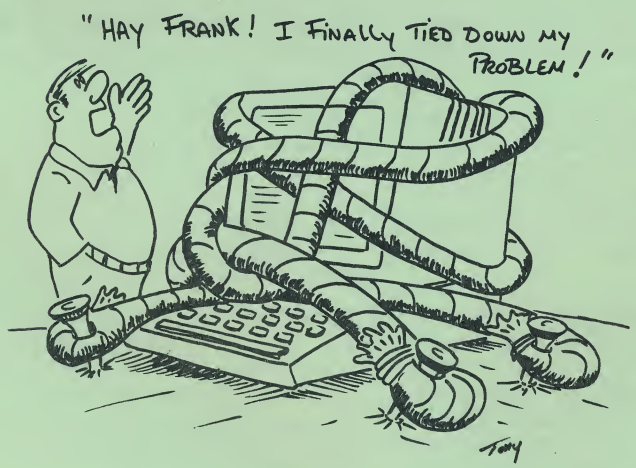
```
0 VARIABLE X 0 VARIABLE Y
: +X  1 X +! ;  : -X -1 X +! ;
: +Y -1 Y +! ;  : -Y  1 Y +! ;
: JOYSTICK ( n-)
  DUP 14 = IF +Y     ELSE
  DUP 13 = IF -Y     ELSE
  DUP  7 = IF +X     ELSE
  DUP 11 = IF -X     ELSE
  DUP  6 = IF +X +Y ELSE
  DUP  5 = IF +X -Y ELSE
  DUP  9 = IF -X -Y ELSE
  DUP 10 = IF -X +Y THEN
  THEN THEN THEN THEN THEN
  THEN THEN ;
: INITIALIZE 2 0 0 SETCOLOR 7 GR.
  10 Y ! 10 X ! ;
```

```
: NOT ( n1-n2 ) 1 XOR ;
: XYPLOT  ( n1n2 - ) 2 COLOR
  X @ Y @ PLOT ;
: UNPLOT  ( n1n2 - ) 0 COLOR
  X @ Y @ PLOT ;
: ?STICK 632 C@ DUP 15 = NOT
  IF JOYSTICK XYPLOT  THEN DROP ;
: JOYSTICKPLOT INITIALIZE BEGIN
  ?STICK ?TERMINAL UNTIL 0 GR. ;
```

This version, in graphics 3, uses the CASE statement. The trigger location at byte 644 is used to erase the screen.

```
0 VARIABLE X  0 VARIABLE Y
0 VARIABLE S  0 VARIABLE T
: STRIG ( n-)
    CASE
  0 OF 0 COLOR ENDOF
  1 OF 1 COLOR ENDOF
    ENDCASE ;
: STICK ( n- )
     CASE
   7 OF  1 X +! ENDOF
  11 OF -1 X +! ENDOF
  13 OF  1 Y +! ENDOF
  14 OF -1 Y +! ENDOF
     ENDCASE ;
: DELAY 0 DO LOOP ;
: STEST
  X @ 39 > IF 39 X ! THEN
  X @  0 < IF  0 X ! THEN
  Y @ 19 > IF 19 Y ! THEN
  Y @  0 < IF  0 Y ! THEN ;
: GRAPHICS-3-DRAWING
  3 GR. BEGIN
  632 C@ S ! 644 C@ T !
  T @ STRIG S @ STICK
  STEST X @ Y @ PLOT
  250 DELAY AGAIN ;
```

(Part three next month.)



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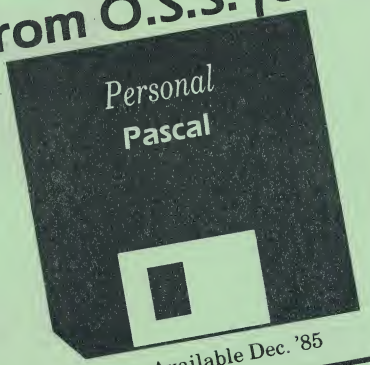

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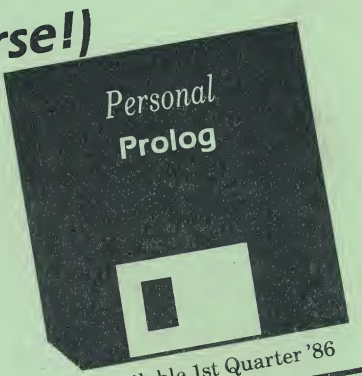

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How would you like to reach a targeted audience of over 700 ATARI computer users? This newsletter has a press run of 800 per month, is read by members and non-members alike, and is sent to over 60 other ATARI User Groups across the U.S. and in several other countries.

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You can get free disks from our nationally famous and immensely growing JACG Disk Library by simply convincing any retailer, vendor, manufacturer, or whomever, to place an ad in the JACG Newsletter. For every quarter page ad you recruit from someone who has either never advertised in the Newsletter or has not advertised in the last 12 months you will get your choice of one free library disk. Half page ads get you two disks and full page ads get you four disks. How can you beat that deal?

Advertising rates are $15/quarter page, $25/half page, and $40/full page. Your customer's ad reaches a targeted audience of over 600 plus computer store and courtesy mailings which bring the total up to well over 700 per issue. Placement of ads in the Newsletter is the exclusive decision of the Editor but every consideration will be given advertiser requests. Space is available on a first-come, first-served, space-available basis. Contact Advertising Manager Helene Rotondo at (201) 635-1395 for further information or any JACG officer listed on the back page of the Newsletter.

Get out there, talk up the efficacy of advertising in the official JACG publication, drum up some business which will bring down the cost of printing, and earn yourself some disks. This offer is limited to current JACG members and each new advertiser, regardless of repeat business with larger or smaller ads, can be used only once. Members of the Commodore, Apple, and IBM Boards of Directors must apply for special dispensation to qualify for this offer.

Rules For Merchant Sales at JACG Meetings

Commercial Sellers Must Advertise

The JACG Executive Committee has adopted the following policy concerning commercial sales at any JACG official meeting. The effective date of implementation will be with the July 14th, 1984 meeting.

1. Any merchant selling or renting products, selling services, or in any way promoting same at JACG club meetings must have an advertisement in the current or previous month's issue of the JACG Newsletter, 1/4 page minimum.

2. The number of merchants shall be restricted to three per meeting unless special permission is granted by the President. Preference will be given to current advertisers.

3. Each merchant will occupy no more than one table space or its equivalent. The JACG does not guarantee availability of tables.

4. Merchants are responsible for the return of all furniture they use to its original location and to leave their area neat and clean before leaving.

5. Merchants will check with the Advertising Manager for permission to set up prior to the meeting to have their qualification confirmed.

6. Merchants may not sell during the official meeting and must cease sales and clean up within 15 minutes after the end of the official meeting.

7. Any merchant violating these rules will be not allowed to operate at JACG functions until compliance is assured through the JACG Executive Committee.

8. A merchant is any person, or group of persons, who operate as a regular full or part-time business for the purpose of profit.

The purpose of these operating rules is to insure non-violation of the Bell Laboratories use agreement which, if violated, could jeopardize JACG's use of the facilities. We appreciate your full cooperation in this matter. These rules do not apply to regular members selling their own second hand hardware or original software as outlined in the Flea Market Rules.

HAVE YOU RENEWED YOUR MEMBERSHIP?

CHECK YOUR MAILING LABEL
FOR MEMBERSHIP EXPIRATION DATE

BE A FAMOUS AUTHOR WITH YOUR SPREADSHEET

By Donald Forbes - JACG

If you want to write, you need an outline. Here is a way to create it automatically with your spreadsheet.

I bought a copy of Syncalc for the Atari for only $21 at our user group flea market, and it works almost as well as the $350 Framework spreadsheet I have at the office.

You have been appointed by Captain Kirk to populate a planet named Urth on the outer fringes of the Milky Way galaxy and have seven days to finish the job. What do you do next?

I set column A of my spreadsheet to 30 characters, which was the maximum, left justified. Then, using 'stream of consciousness' I started to list my ideas and topic headings as they came to mind.

Headings should be distinguished from topics, preferably by printing the headings in capital letters, and the topics in lower case letters. Because I do not have upper and lower case letters, I set the headings flush left (pushed against the left margin), and indented the other items one space. Here is my list:

```
     A
 1 CREATE MAN; MALE AND FEMALE
 2 DOMINION OVER LIVING THINGS
 3DAY SEVEN
 4 REST
 5 CREEPING THINGS, BEASTS
 6 LIGHT IN FIRMAMENT
 7 LESSER LIGHT FOR NIGHT
 8 GREATER LIGHT FOR DAY
 9DAY ZERO
10 DARKNESS ON FACE OF DEEP
11 URTH WITHOUT FORM AND VOID
12 SEPARATE LIGHT FROM DARKNESS
13DAY FOUR
14 DRY LAND APPEAR
15 GREAT SEA MONSTERS
16 BIRDS FLY ABOVE URTH
17DAY THREE
18DAY TWO
19 URTH PUT FORTH VEGETATION
20DAY FIVE
21 SEPARATE WATERS ABOVE & BELOW
22DAY ONE
23DAY SIX
```

The next task is to label and sort the headings, so we insert a new column, two characters wide, which becomes column A. Then we label the headings in sequence, starting with A through G. (You can insert new headings between, say, C and D by labelling them anything from CA to CZ.) Finally we sort the whole worksheet on column A. Our worksheet (skipping lines 3 through 13) now looks like this:

```
  A      B
 1    CREATE MAN; MALE & FEMALE
 2    DOMINION OVER LIVING THINGS
....
14    URTH PUT FORTH VEGETATION
15    SEPARATE WATERS ABOVE & BELOW
16A DAY ZERO
17B DAY ONE
18C DAY TWO
19D DAY THREE
20E DAY FOUR
21F DAY FIVE
22G DAY SIX
23H DAY SEVEN
```

Our next job is to label the topics with the same labels as the headers, like this:

```
  A      B
 1G  CREATE MAN; MALE & FEMALE
 2G  DOMINION OVER LIVING THINGS
....
14D  URTH PUT FORTH VEGETATION
15C  SEPARATE WATERS ABOVE & BELOW
....
```

If we now run another sort on column A, we can unite the topics with their headings. However, we still need to put the topics in sequence under each heading. Once again we insert a new column to the left of column B, make it 4 characters wide, and provide one decimal digit of precision. Now we number each line in order, using 0.0 for the headings and 1.0 and 2.0 for the topics. The decimal point allows us to insert one or more new topics between 1.0 and 2.0 if we like.

Here are the first few lines of our revised spreadsheet:

```
  A  B          C
 1A 1.0  URTH WITHOUT FORM & VOID
 2A 2.0  DARKNESS ON FACE OF DEEP
 3A 0.0 DAY ZERO
 4B 1.0  SEPARATE LIGHT FROM DARKNESS
```

All we have to do now is sort the spreadsheet on columns A and B and print it. Because B is the minor sort and A the major, we sort first on column B and then on A. If anything it missing, add a new row at the bottom and sort again. Conversely, any row can be deleted at any time.

Here is our final outline:

```
  A  B            C
 1A 0.0 DAY ZERO
 2A 1.0  DARKNESS ON FACE OF DEEP
 3A 2.0  URTH WITHOUT FORM & VOID
 4B 0.0 DAY ONE
 5B 1.0  SEPARATE LIGHT FROM DARKNESS
 6C 0.0 DAY TWO
 7C 1.0  SEPARATE WATERS ABOVE & BELOW
 8D 0.0 DAY THREE
 9D 1.0  DRY LAND APPEAR
10D 2.0  URTH PUT FORTH VEGETATION
11E 0.0 DAY FOUR
12E 1.0  LIGHT IN FIRMAMENT
13E 1.1  LESSER LIGHT FOR NIGHT
14E 1.2  GREATER LIGHT FOR DAY
15F 0.0 DAY FIVE
16F 1.0  GREAT SEA MONSTERS
17F 2.0  BIRDS FLY ABOVE URTH
18G 0.0 DAY SIX
19G 1.0  CREEPING THINGS, BEASTS
20G 2.0  CREATE MAN; MALE & FEMALE
21G 3.0  DOMINION OVER LIVING THINGS
22H 0.0 DAY SEVEN
23H 1.0  REST
```

Now that your outline is complete you can prepare your proposed plan for Captain Kirk. Or you can use it as the basis of your report. Or you could write a book about your experiences.

Did you ever wonder how people ever managed to write books before they invented word processors and spreadsheets? Or what they did with their time before TV??

FLEA MARKET RULES

****

In order to clarify the intention of the Executive Committee in sanctioning the use of the BTL lobby before and after monthly meetings for use as a member flea market we publish the following rules:

1. All flea market sellers must be current JACG members.

2. Space is provided on a first-come, first-served basis.

3. Only ORIGINAL programs with ORIGINAL documentation may be sold in the area of software.

4. Hardware of any type may be sold normally without constraint. The Executive Committee reserves the right, however, to limit the physical size and space consumed by such hardware.

5. Flea market business will be conducted only in the lobby and ONLY when the meeting is not in session in the auditorium.

6. The Executive Committee reserves the right to deny or suspend the privilege of flea market usage to any person, member or not, for infraction of these operating rules.

Writing For The JACG Newsletter

****

Articles should be submitted to the Editor by the 20th of the month for inclusion in the next issue. Submissions preferred on disk, using LJK Letter Perfect or Atari Writer. Font style should be Elite or Proportional with right hand justification. If hard copy is submitted the final printed width should be 4-1/4 inches from left margin to right margin. All formats will be considered including hand written documents if first arranged with the Editor.

We want to encourage everyone to voice his/her thoughts, knowledge, and opinions. Writing will be modified at the discretion of the Editor. No piece will be knowingly altered out of original intent.

****

GIVE A BIT!

Mort Pye-Editor
Newark Star Ledger
#1 Star Ledger Plaza
Newark, N.J. 07101

November 11, 1985

Dear Sir,

The Star Ledger published a HOME Electronics supplement on May 8, 1985. Rich Warren, described as an audio columnist and free-lance writer from Chicago, provided the five computer related articles in this section. Two of these articles were inappropriate and misleading.

"IBM still takes the biggest byte in the computer market" described the dominance of IBM. Although IBM unquestionably sets the standard in the business world, this does not necessarily apply in the home market. Future Computing Inc. of Dallas estimated that there were 12 million home computers at the end of 1984. Only 6.2% of them were projected as IBM. The rest consisted of Commodore (23.9%), Texas Instruments (17.1%), Apple (11.7%), Atari (11.5%), Tandy (11%), and various types (18.6%). This information was in the Money Talks section of the June 9, 1985 Daily News.

"Get to know your software; it's the brains of any system" not only ignored the supplement's theme but was misleading. The average home user does not need a $350 spreadsheet program which in turn requires a computer costing at least $1300 to run. Low cost computers have many potential uses, the least of which is an inexpensive introduction to computer operation.

The following statement was the most damaging;

> "With some of the low priced home computers the selection of non-game software is extremely limited, and often you must write your own. An Atari for example may have only two or three word processors or database programs available compared with the hundreds for MSDOS."

Although the number of Atari choices for specific applications may be limited, at least one of each type is more than adequate. Some items are excellent and match the quality of more expensive software. A large amount of similiar software only guarantees more difficult choices. Choosing three, much less just one, of the word processors available for Atari is difficult enough without having to choose from hundreds. Last year Consumer Reports rated Atariwriter the best word processor available for a home computer even though it is only available for Atari.

The implication that you will have to write your own software is the best way to scare off interested novices. There are numerous application programs available for Atari (and Commodore) that Mr. Warren did not address. Print Shop has been one of the best selling programs. You can create greeting cards, banners and signs with the built-in designs or create your own and have fun doing it. Music Construction Set is an electronic music sheet similiar to a word processor in that repetitious notes can be duplicated automatically. Leaps and Bounds was designed to teach young children the alphabet. Simply stated, it is excellent. The Tax Advantage (income tax preparation), Syncalc (spreadsheet) and Data Perfect (data base) provide the means to establish a more than adequate home accounting system without spending the entire budget to purchase it. The other uses are varied as is the amount of specialized software.

I have the highest respect for the Star Ledger but this supplement was too biased in favor of more expensive computers. Should you publish a similiar supplement or plan a special series of computer articles may I recommend Arthur Leyenberger to provide at least one article. He has written extensively for numerous computer-related magazines and has a working knowledge of all personal computers. In addition he is aware of new products on the horizon, an area ignored by Mr. Warren.

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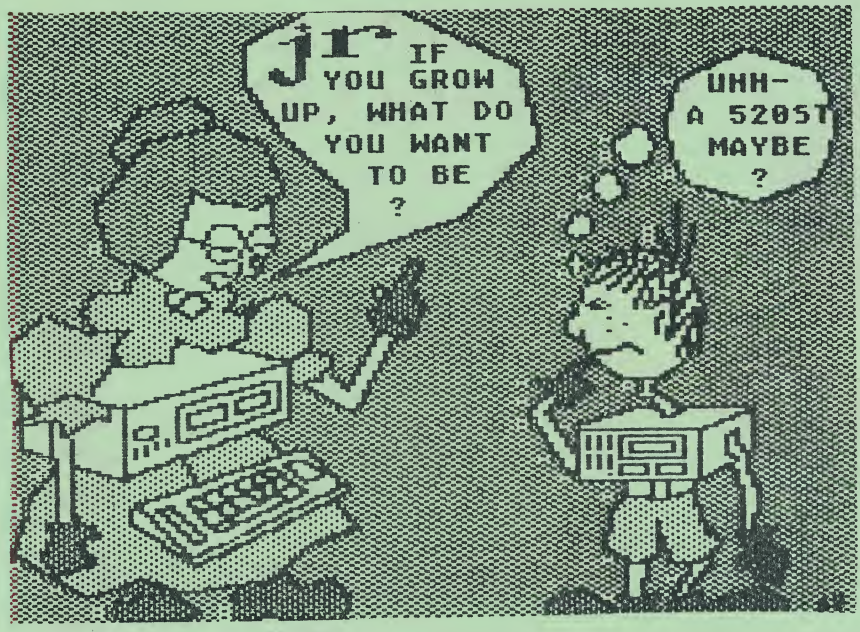

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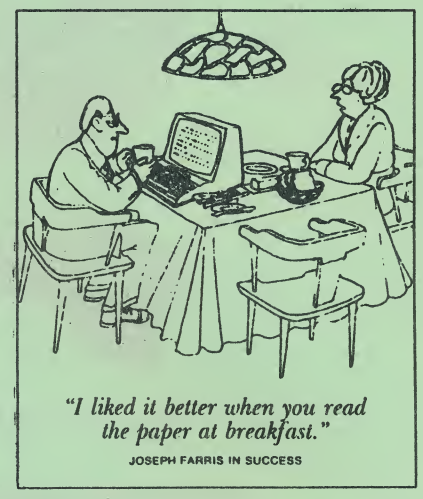
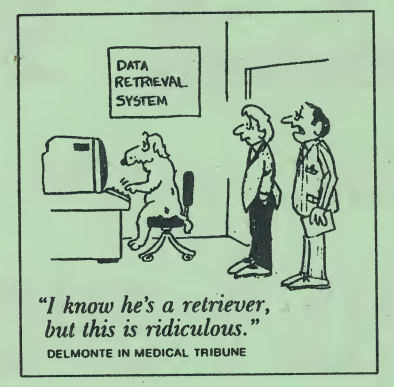


"I liked it better when you read the paper at breakfast."

JOSEPH FARRIS IN SUCCESS

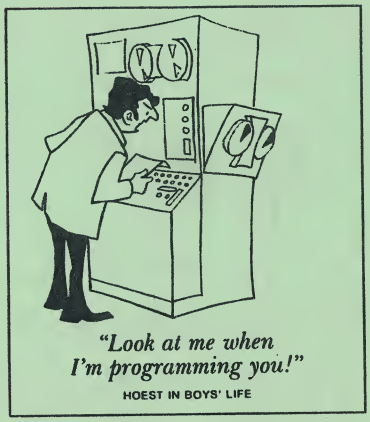


"I know he's a retriever, but this is ridiculous."

DELMONTE IN MEDICAL TRIBUNE

"HI, HILDA — I'M HOME! BRING MY DINNER TO ME AT THE COMPUTER!"

The I/O Connector
San Diego

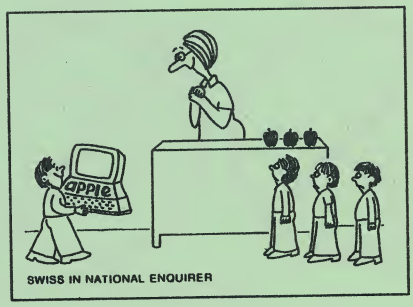


"Look at me when I'm programming you!"

HOEST IN BOYS' LIFE

"Computer still in the shop, Jenkins?"

TED TROGDON, SINGER COMMUNICATIONS, INC.



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Lebanon, NJ 08833

Sound Soft
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Andover, NJ 07821
(201) 786-6060

Optimized Systems Software, Inc.
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San Jose, CA 95129
(408) 446-3099

**Towaco Associates
Box 7
Towaco, NJ 07082
(201) 334-4443

The above listings are free to current advertisers. Others interested in being listed in this column should send business address and telephone number with check for $5 per month, payable to JACG, to Advertising Manager Helene Rotondo, 145 North Hillside Avenue, Chathan, NJ 07928.

TRADING POST

Trading Post is a service for JACG members who wish to sell or swap items of any type. There is no charge for this service. Material must reach the Editor by the 20th of the month to be considered for inclusion in the following month's Trading Post. No commercial services or items will be accepted.

>>>>>>>>><<<<<<<<<

FOR SALE: ATR8000, 64K w/CPM, (2) 5-1/4" DSDD Tandon drives, cabinet and power supply, all cables, manuals and software included, 30 disks, Hayes Smartmodem. Make offer. Call Gerry at (201) 756-3827.

HELP! JACG member needs help locating Atari cassette-based software in the "Talk & Teach" educational series originally produced by Dorsett, Inc. Using them to help special education students overcome learning disabilities. The following titles are wanted:

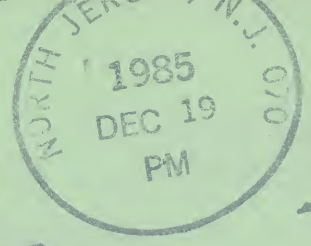
CX6006-Counselling Procedures
CX6007-Principles of Accounting
CX6008-Physics
CX6012-Effective Writing

If you have, or know, sources (I have tried ALL the advertisements), please contact Bill Stephens, 16 E. Central Ave., Wharton, NJ 07885, (201) 361-6166. Thanks for your help!

FOR SALE: One of the following printers (first come, first sold).
Citizen's dot matrix printer MPS 10, 180 cps, near letter quality, used under 20 hours (needs interface), $250.
Panasonic KXP 1092, 180 cps, near letter quality, used about 50 hours (needs interface), $325.
Call A. Steiner evenings (201) 763-7927.

I DIRECT YOU TO
WRITE AN ARTICLE
FOR THE NEWSLETTER!

J A C G
JERSEY ATARI COMPUTER GROUP
14 WHITMAN DRIVE
DENVILLE, NEW JERSEY 07834



FIRST CLASS MAIL

JACG NEWSLETTER — VOLUME 5, NUMBER 4

December 1985

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